

REMARKS

In the Office Action dated April 12, 2002, the specification was objected to because the abstract was more than 250 words. A new abstract was required. The specification was also objected to because reference was made to the claim numbers in the specification. Claims 5, 8-10 and 13 were objected to on wording grounds. Claims 5, 6, 8-10 and 13-19 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite. Claim 1 was rejected under 35 U.S.C. § 102(b) as being anticipated by the Turner 4,090,064 patent. Claims 2-4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Turner in view of the Buisson et al. 4,988,995 patent (Buisson). Claims 5-6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Turner and Buisson in further view of the Stokes 5,638,308 patent. Claims 7 and 8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Turner in further view of the Iida 4,565,456 patent. Claims 9 and 10 were rejected under 35 U.S.C. 103(a) as being unpatentable over Turner in view of Stokes. Claim 11 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Turner and Buisson in further view of German Published Application No. DE 41 23 895 A1 (German '895). Claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Turner and Buisson in further view of the Kawamura 4,690,532 patent. Finally, claims 13-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Turner in view of Stokes and the Ikeda et al. 4,634,292 patent (Ikeda).

For the reasons outlined in detail below, it is respectfully submitted that the pending claims are in condition for allowance over the art of record.

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This amendment is responsive to the communication of April 12, 2002. Examination and consideration of new claims 20-38 are respectfully requested.

Amendments to the specification have been made in accordance with the Examiner's suggestions for correction. In each instance, applicant has replaced the recitation of "according to claim ___" with --according to one aspect of the present invention-- or --according to another aspect of the present invention--. As such, it is believed that the objection to the specification is now moot.

In response to the rejection to the abstract for being too wordy, applicant has rewritten the abstract so as to limit it to less than the maximum 250 words allowed. The new abstract is submitted herewith. In addition, the previous abstract, which recited an object of the present invention, has been moved in whole to the specification on page 9 before the heading "Brief Description of the Drawings".

In all of the rejections made of previously pending claims 1-19, the base reference was, for each rejection, the Turner patent. It is applicant's view that the claims as now written patentably define over Turner. In Turner, the displays 100, 106, 108, 110 and 112 are used to display a temperature value. More specifically, as noted in column 4, line 63 to column 5, line 1, the "zero order output" and "first order output" from a counter 126 are displayed in a display 110 and a "second order output" from the counter 126 is displayed in a display 112. Thus, in Turner, a temperature value of 4 digits has a maximum digit that is computed by decoders 114, 116, 118 and 120 and counters 122, 124 and 126 and is displayed in four digits by the displays 106-112. In other words, a digit number for a computation of the

temperature value is quite the same as that for display of the temperature value.

In this regard, Turner is quite different from the present invention in which a digit number of the temperature value as computed is larger than that of the display device. In addition, it is noted that in Turner, four outputs of the counter 126 (that is zero order output to third order output) are displayed in two displays 110 and 112 simultaneously. In contrast, in the present invention, an output of a counter is not displayed in two displays simultaneously. Rather, the temperature value computed by the computation device (that has a larger digit number than the display digit number of the display) is displayed in a single display in a time sharing manner. One advantage of the instant invention is that it is possible to display the temperature of an object under temperature measurement in a single display device (6) even where a temperature value as computed by the computation device (5) has a larger digit number than the number of display digits of the display device (6).

Those features which are missing from Turner are also missing from any of the other applied references to Buisson, Stokes, Iida, the German '895 publication, Kawamura or Ikeda.

For example, in Buisson, a box 1 has two indicators 12 and 15 on different surfaces and either one of the indicators 12 and 15 can be displayed by a manual switch 42. In short, in Buisson, either of the two indicators 12 and 15 can be selected, but not both. Therefore, Buisson is quite distinct from the present invention in which the temperature value computed by the computation device that has a larger digit number than the number of digit displays of the display device is displayed in a single display in a time sharing manner.

The Claims Distinguish Over the References of Record

Claim 20 now calls for a control device that displays a first portion with a first set of predetermined digits, and a second portion with a second set of predetermined digits, including any digit or digits other than the first predetermined digits. Turner fails to teach a control device that displays separate representations of the same temperature measurement. By sub-dividing the temperature measurement into a plurality of portions, it is possible to display the entirety of the measurement on a display with fewer digits than the number of digits in the measurement. It is thus respectfully submitted that independent **claim 20** now distinguishes patentably and unobviously over the references of record.

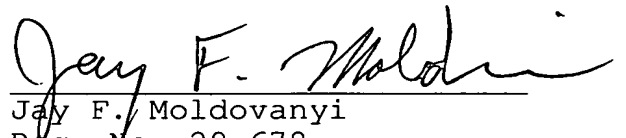
In the same manner, dependent claims 21-38, which more specifically define the detailed subject matter of their parent claim, or each other, are also in condition for allowance over the art of record.

CONCLUSION

For the reasons set forth above, an early allowance of claims 20-38 is earnestly solicited.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this **AMENDMENT A** in connection with U.S. Patent Application Serial No. 09/700,449 is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C., 20231, on this 10th day of October, 2002.

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Version with Markings to Show Changes Made

In the Specification:

Please replace the paragraph spanning pages 4 and 5 (running from page 4, line 20 to page 5, line 5) with the following new paragraph:

-[As a characteristic of the present invention for attaining the aforementioned object, the invention according to claim 1 provides an electronic thermometer including:] According to one aspect of the present invention, an electronic thermometer includes temperature measurement means for generating a temperature measurement signal based on a temperature of an object under temperature measurement; computation means for computing the temperature of the object in a predetermined computation digit number based on the temperature measurement signal; display means for displaying the temperature computed by the computation means in a predetermined display digit number; and digit shift means for changing a display digit of the temperature computed by the computation means for displaying on the display means.--

Please replace the paragraph on page 5, lines 6-14 with the following new paragraph:

-[In the invention according to claim 2] According to another aspect of the present invention, the predetermined computation digit number of the computation means is larger than the predetermined display digit number of the display means, and the digit shift means switches first display for displaying upper digits of the predetermined computation digit number computed by the computation means, and second display for displaying lower digits of

the predetermined computation digit number computed by the computation means.--

Please replace the paragraph on page 5, lines 15-17 with the following new paragraph:

-[In the invention according to claim 3] According to another aspect of the present invention, the digit shift means alternately switches the first display and second display.--

Please replace the paragraph on page 5, lines 18-20 with the following new paragraph:

-[In the invention according to claim 4] According to another aspect of the present invention, the digit shift means selects either one of the first display and the second display.--

Please replace the paragraph on page 5, lines 21-25 with the following new paragraph:

-[In the invention according to claim 5] According to another aspect of the present invention, the display means includes a plurality of decimal point display sections for displaying a decimal point, and the digit shift means switches a position of the decimal point between the first display and the second display.--

Please replace the paragraph spanning pages 5 and 6 (running from page 5, line 26 to page 6, line 3) with the following new paragraph:

-[In the invention according to claim 6] According to another aspect of the present invention, the display means includes only one decimal point display section, the decimal point display section is turned on in the first

display, while the decimal point display section is turned off in the second display.--

Please replace the paragraph on page 6, lines 4-13 with the following new paragraph:

-[In the invention according to claim 7] According to another aspect of the present invention, the electronic thermometer is an electronic clinical thermometer for measuring a body temperature, the computation means computes the body temperature in Centigrade four digits from a digit of 10 to a digit of 1/100, the predetermined display digit number of the display means is three digits, and the digit shift means displays upper three digits of the Centigrade four digits in the first display, and displays lower three digits of the Centigrade four digits in the second display.--

Please replace the paragraph on page 6, lines 14-23 with the following new paragraph:

-[In the invention according to claim 8] According to another aspect of the present invention, the electronic thermometer is an electronic clinical thermometer for measuring a body temperature, the computation means computes the body temperature in Centigrade four digits of a digit of 10 to a digit of 1/100, the predetermined display digit number of the display means is three digits, and the digit shift means displays upper three digits of the Centigrade four digits in the first display, and displays lower one digit of the Centigrade four digits in the second display.--

Please replace the paragraph spanning pages 6 and 7 (running from page 6, line 24 to page 7, line 5) with the following new paragraph:

-[In the invention according to claim 9] According to another aspect of the present invention, the electronic thermometer is an electronic clinical thermometer for measuring a body temperature, the computation means computes the body temperature in Fahrenheit five digits from a digit of 100 to a digit of 1/100, the predetermined display digit number of the display means is four digits, upper four digits of a computed value are displayed in the first display, and at least three lower digits of the computed value are displayed in the second display.--

Please replace the paragraph on page 7, lines 6-14 with the following new paragraph:

-[In the invention according to claim 10] According to another aspect of the present invention, the electronic thermometer is an electronic clinical thermometer for measuring a body temperature, the computation means computes the body temperature in Fahrenheit five digits from a digit of 100 to a digit of 1/100, the predetermined display digit number of the display means is four digits, upper four digits of a computed value are displayed in the first display, and lower one digit of the computed value is displayed in the second display.--

Please replace the paragraph on page 7, lines 15-17 with the following new paragraph:

-[In the invention according to claim 11] According to another aspect of the present invention, a display mode of the first display is different from a display mode of the second display.--

Please replace the paragraph on page 7, lines 18-21 with the following new paragraph:

-[In the invention according to claim 12] According to another aspect of the present invention, the display mode of the first display is a lighting display of a body temperature, and the display mode of the second display is a blinking display of the body temperature.--

Please replace the paragraph spanning pages 7 and 8 (running from page 7, line 22 to page 8, line 2) with the following new paragraph:

-[In the invention according to claim 13] According to another aspect of the present invention, the electronic thermometer includes an operation switch for outputting a measurement start signal to start a body temperature measuring operation by a predetermined operation, and operation pattern detection means for detecting whether or not the measurement start signal has a predetermined pattern, and the display is switches based on a detection result of the operation pattern detection means.--

Please replace the paragraph on page 8, lines 3-6 with the following new paragraph:

-[In the invention according to claim 14] According to another aspect of the present invention, the measurement start signal to be detected by the operation pattern detection means is a signal generated during a measurement start operation by the operation switch.--

Please replace the paragraph on page 8, lines 7-10 with the following new paragraph:

-[In the invention according to claim 15] According to another aspect of the present invention, the measurement start signal to be detected by the operation pattern detection means is a signal generated in a display

state of the measurement result after temperature measurement.--

Please replace the paragraph on page 8, lines 11-14 with the following new paragraph:

-[In the invention according to claim 16] According to another aspect of the present invention, the predetermined pattern of the measurement start signal is a pattern in which the measurement start signal continuously lasts for a predetermined time or more.

Please replace the paragraph on page 8, lines 15-19 with the following new paragraph:

-[In the invention according to claim 17] According to another aspect of the present invention, the predetermined pattern of the measurement start signal is a pattern in which a signal lasting for a predetermined time or more is continuously generated at a predetermined time interval.--

Please replace the paragraph on page 8, lines 20-23 with the following new paragraph:

-[In the invention according to claim 18] According to another aspect of the present invention, the predetermined pattern of the operation signal is a pattern in which a signal lasting for a predetermined time or less is continuously generated at a predetermined time interval.--

Please replace the paragraph spanning pages 8 and 9 (running from page 8, line 24 to page 9, line 1) with the following new paragraph:

-[In the invention according to claim 19] According to another aspect of the present invention, the

predetermined pattern of the operation signal is a pattern in which a first signal lasting within a first range of time, and a second signal lasting within a second range of time are continuously generated at a predetermined time interval.--

Please replace the current abstract on pages 42 and 43 of the application with the following new abstract:

[An object of the present invention is to provide an electronic thermometer in which without using a special display in a manufacturing process, or increasing a digit number of a display on a main body of a thermometer, it can be confirmed whether or not a value of a digit lower in order than a digit displayed as a body temperature to a measuring person is adjusted within a predetermined adjustment range. Moreover, another object of the present invention is to provide an electronic thermometer in which by using a display section with a digit number smaller than that of all information to be displayed, all the information to be displayed can be displayed.

To attain the object, the present invention comprises temperature measurement means for generating a temperature measurement signal based on a temperature of an object under temperature measurement; computation means for computing the temperature of the object based on the temperature measurement signal in a predetermined computation digit number; display means for displaying the temperature computed by the computation means in a predetermined display digit number smaller than the predetermined computation digit number; first display control means for displaying the temperature computed by the computation means from a highest digit to the predetermined display digit in the display means; and

second display control means for displaying at least the temperature in a digit not displayed in the display means by the first display control means among the temperature computed by the computation means.

According to the present invention, there can be provided an electronic thermometer in which without using the special display in the manufacturing process, or increasing a digit number of a display on a main body of the thermometer, it can be confirmed whether or not the value of the digit lower in order than the digit displayed as the body temperature to the measuring person is adjusted within the predetermined adjustment range. Moreover, according to the present invention, there can be provided the electronic thermometer in which by using the display section with the digit number smaller than that of all information to be displayed, all the information to be displayed can be displayed.] An electronic thermometer includes a display device for displaying a temperature of an associated object under temperature measurement in a predetermined display digit number. A temperature measurement device generates a temperature measurement signal based on the temperature of the associated object. A computation device is provided for computing a temperature value of a digit number larger than the predetermined display digit number to be displayed on the display device on the basis of the temperature measurement signal. A control device controls the display device to display a first temperature value portion and a second temperature value portion. The first portion is displayed with a first set of predetermined digits and the second portion is displayed with a second set of predetermined digits, including any digit or digits other than the first predetermined digits.